Using Administrative Data Sources in the Estimation of Emigration

Introduction

Reliable information about emigration is important for a number of reasons. It is a significant component of population change in many countries. For this reason, robust information is needed on the demographic characteristics of people leaving the country each year, to make accurate population estimates.¹ This includes the age, sex and area of residence of the migrant when they left the country. Information on emigration is also required to gain a better understanding of migration trends and the cumulative effects of migration on the composition of the country and the distribution of migrants abroad. For example, intended length of stay in the destination country, reason for emigration, nationality of emigrants and their occupation can help to inform the drivers of emigration, how long people are likely to stay away and the potential economic implications for both countries of their move.

Population estimates and projections, which draw on migration estimates, are essential for planning, resource allocation, business decisions and a broad range of public policy purposes. Population statistics also provide essential contextual information, in grossing-up surveys and in calculating key social and economic indicators, e.g. life expectancy, gross domestic product per head of population. However, in this country the migration component is the most difficult to estimate accurately because of the lack of direct information that is available about migrants and migration, particularly emigration. By contrast, recording of information on the other main component, natural change (that is births minus deaths), is considered to be generally reasonably complete.

Currently the International Passenger Survey (IPS) is the main source of information used to estimate migrants entering and leaving Great Britain. This is a large multipurpose port survey that interviews a 0.3...
per cent sample of travellers.\textsuperscript{2,3} While a port survey is essential in the UK as it is the only way that direct estimates of migration can be made, the sample sizes are relatively small. Approximately 1 per cent of those sampled are long-term migrants (see Box One) and less than half of these are emigrants. In 2005, the sample sizes were approximately 3,000 for in-migration and 800 for out-migration and so the estimates are subject to considerable sampling error. The standard errors for estimates of total international in-migration to the UK and out-migration from the UK were 3.7 per cent and 4.8 per cent respectively. The resulting estimates of migration are not sufficiently robust for all the uses to which they are put.

From January 2007, the IPS sample of emigrants was boosted in a similar way to that already used for immigration. In addition to this enhancement, alternative sources and approaches need to be found which can both provide more information about emigration and emigrants and also improve the quality of the estimates that are made. Drawing on international experience, a pilot study was conducted to assess the feasibility of running questions on emigration in household surveys in Great Britain. The findings of that pilot were reported in \textit{Population Trends} \textsuperscript{2,3} This article summarises the work carried out into the potential use of some key administrative data sources to get better information about emigrants.

**Definition of a migrant**

ONS migration statistics, which feed into the UK usually resident population estimates series, are based on the United Nations (UN) definition of a long-term migrant. This definition is shown in Box One.

**Box one**

**United Nations definition of a long-term migrant**

The United Nations recommended definition of a long term international migrant is:

A person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residence. From the perspective of the country of departure the person will be a long-term emigrant and from that of the country of arrival the person will be a long-term immigrant.

International migration is a key component of population change. The UK has experienced increasing levels of both inward and outward international migration in recent years.\textsuperscript{1} Figure 1 shows that in 1993 international migration flows to and from the UK were approximately equal, resulting in almost zero net migration. Between 1993 and 2005 migration into the country increased from 265,000 to 565,000, whilst out-migration increased more slowly, from 266,000 to 380,000 in 2005. This resulted in a net international migration inflow to the UK of 185,000 in 2005: this was slightly lower in 2005 than 2004 due to a small decrease in estimated in-migration and a small increase in estimated out-migration.

The UK has a wider range of existing data sources on immigration than on emigration. Sources such as the Census and household surveys do not collect any information on emigration (as emigrants are no longer part of the resident population). Information from administrative sources can be limited if there is no administrative imperative for people to de-register when they leave the country. Furthermore, no border control information is currently collected for people leaving the UK. This is a general problem in the field of international migration statistics as most countries lack reliable information on emigration. ONS have investigated whether reliable information on out-migration from the UK can be obtained from overseas data sources on in-migration from the UK. This work will be reported in a future \textit{Population Trends} article.

**Using administrative data sources to measure emigration**

Given the plethora of government departments and public bodies, it would seem likely that some administrative body would be notified when a person emigrates. Indeed, Box Two, shows a checklist for potential UK citizens moving abroad, detailing the steps that such a person should undertake in terms of notifying authorities. These steps have been considered when investigating data sources held in the UK that might provide information on UK citizens moving abroad. While, these are just examples of the kind of data that could be available, it would seem that there are many potential data sources that might provide useful information on the size and nature of emigration from the UK.

A recommendation of a previous review of international migration statistics\textsuperscript{3} was that the potential of UK administrative sources on UK citizens living abroad be further investigated to inform estimates of emigration. A key potential advantage of administrative sources, relative to survey data, is that they often cover a much higher proportion of the population of interest than a survey can and may, therefore, be useful to overcome some of the sample size limitations of the survey data that are currently used. ONS has focussed some efforts on assessing some of the data sources implied in the list above to see how they could complement the existing survey estimates. The sources ONS has investigated are discussed in this article; these are pension, health and driving licence data. Further work is required to assess the usefulness of other potential sources and these are considered before the findings of the investigation into three potential administrative sources.

The list in Box Two of the steps that are taken when someone leaves the UK to emigrate was used to identify whether there are alternative administrative data sources that might have the potential to improve estimates of emigration, either on their own or if used in combination.
Box two

Checklist for those emigrating abroad

• For emigration to countries outside of the EEA, contact should be made with the British Consul in that country and its foreign consulate in the UK.
• Obtain a state pension forecast from DWP.
• Obtain information on tax liability from HM Revenue and Customs.
• Inform the local Social Security Office, HM Revenue and Customs National Insurance Contributions Office and the Department for Work and Pensions and provide them with contact details.
• Consider taking out private health insurance to cover private medical and dental treatment and medical repatriation back to the UK.
• Inform the family doctor, dentist and other practitioners.
• Inform mortgage lender and insurance provider if a UK property is to be rented or kept empty.
• Inform the Council Tax department and electoral registration unit of the local council.
• Inform utility companies to arrange final bills and provide a forwarding address to send outstanding payments/ refunds.
• Inform the bank and building society.
• Arrange for re-direction of mail with the Post Office.
• If children are emigrating, inform the school and local education authority.
• Register with the British Consulate.
• For non-EEA countries, apply for an International Driving Permit (IDP).
• Register in the UK as an overseas elector.

Source: www.directgov.gov.uk

with other sources of information. Box Three summarises the research carried out into a number of potential datasets. For the majority of these sources, it is not possible to separate long-term emigration from a shorter term absence for work, holidays or short term travel, thus making them inappropriate for the measurement of emigration. The new European Health Insurance Card (EHIC) which replaced the E111 form, and entitles the holder to reduced cost and sometimes free medical treatment whilst in a European Economic Area (EEA) country or Switzerland, may prove to be a potential source of information on emigration, but for the data to be useful, intended duration of stay abroad would need to be recorded. ONS plan to liaise with the Department of Health to monitor the development of this data source.

ONS will continue to assess the availability and potential value of other data sources e.g. airline information where a single ticket is purchased for leaving the UK, bearing in mind that Civil Aviation Authority data are already used to weight estimates of migration flows based on data collected by the IPS.

Pension, health and driver licences data

While the list in Box Two, illustrates the myriad of data sources that could be available; initial investigations have been concentrated on information held by the Department of Work and Pensions (DWP) on recipients of pensions living abroad; National Health Service data captured when people report to their doctor that they are emigrating; and records held by the Driver and Vehicle Licensing Agency (DVLA) on people surrendering their licence when they leave the country.

UK citizens abroad in receipt of a state pension

Description of the data source

The Department of Work and Pensions (DWP) holds information on UK citizens that receive a state pension while living abroad. This data source might assist in the estimation of emigration of people of pension age. The data available from the DWP are a random sample of five percent of records held on pension recipients and identify their place of residence based on their postcode. By taking two snapshots of this sample database and noting changes in residence, it is possible to identify those UK citizens moving abroad that claim a pension, and thus an emigration flow can be produced.

Data Quality Issues

These estimates are from a five per cent sample of pension recipients and, they, like the estimates currently derived from the IPS, are subject to sampling error. In addition, the data are only extracted biannually and may not be as timely as one would wish. These two potential limitations could be removed by altering to using a snapshot of all records held by the DWP, removing sampling issues. This snapshot of all records is also taken more frequently by the DWP, removing issues of timeliness.

There are also coverage issues with the DWP dataset. Firstly there are people that do not claim a pension when they are eligible, for whatever reason. The extent of this undercount can be examined by comparing the total numbers of pensioners held on the DWP database with those estimated by ONS. This is shown in Table 1. Since 2000, this amounts to about 1.7 per cent of men and 3.9 per cent of women. In addition, since April 2005, it has been possible to defer claiming a state pension for a maximum of ten years to allow the claimant to continue to work, claiming a higher pension at a later date. It therefore might be expected that the estimates from the DWP database would be lower than the IPS.

In addition to coverage issues, analysis by ONS has identified further shortcomings that need to be considered before using DWP data as a source for emigration estimates. Firstly the data may include migrants that do not emigrate for the full twelve months and thus would not be defined as a migrant under the definition set out by the UN; secondly, the accuracy of the data depends on the pension recipient notifying the DWP of their change of address and with many pensions now being paid directly into bank accounts, there is less incentive to do this as a matter of priority and there may be a resulting time lag. In addition DWP have also confirmed that there could be coding errors where the overseas category could have been mistakenly coded to Great Britain.

Table 1

<table>
<thead>
<tr>
<th>Percentage of men aged 65 and over not claiming a pension</th>
<th>Percentage of women aged 60 and over not claiming a pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 2000 1.21</td>
<td>4.41</td>
</tr>
<tr>
<td>Sept 2001 1.09</td>
<td>4.22</td>
</tr>
<tr>
<td>Sept 2002 1.34</td>
<td>4.24</td>
</tr>
<tr>
<td>Sept 2003 1.55</td>
<td>4.16</td>
</tr>
<tr>
<td>Sept 2004 1.75</td>
<td>3.88</td>
</tr>
<tr>
<td>Average 1.7</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: DWP - 5 per cent sample pensions database. ONS mid-year population estimates, GROS mid-year population estimates
### Box three

**Other data sources that could be used to assess emigration**

<table>
<thead>
<tr>
<th>Potential data source</th>
<th>Description</th>
<th>Summary of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child benefit</td>
<td>Children moving abroad are paid child benefit for a twelve-week period</td>
<td>These data do not hold information of the length of stay so it is not possible to identify if they remain abroad for the full 12 month period.</td>
</tr>
<tr>
<td>HM Revenue and Customs</td>
<td>UK Foreign Office recommends that health insurance is obtained when someone emigrates abroad.</td>
<td>There are a large number of health insurance companies and so it is difficult to assess the total numbers emigrating. There are also issues of data confidentiality surrounding these data.</td>
</tr>
<tr>
<td>Private health insurance</td>
<td>This entitles the holder to reduced costs and sometimes free medical treatment in the EEA and Switzerland.</td>
<td>As travellers are encouraged to take out private health insurance in addition to this card, large groups are excluded.</td>
</tr>
<tr>
<td>European Health Insurance Card (EHIC)</td>
<td>It is recommended that people moving or retiring abroad register with the British Consulate.</td>
<td>Data are available on the number of British Nationals registered with Consulates abroad but only where there was a risk of civil disorder. Most emigrants (who tend to move to EU or Old Commonwealth countries) would be excluded.</td>
</tr>
<tr>
<td>Foreign Office</td>
<td>People moving abroad need to inform their local council to avoid further tax bills.</td>
<td>Investigations with local councils confirm that they cannot identify those people who have moved abroad.</td>
</tr>
<tr>
<td>Council Tax</td>
<td>Some emigrants are eligible for Incapacity Benefit.</td>
<td>These data do not distinguish a true migrant from those abroad on holiday or working abroad temporarily.</td>
</tr>
<tr>
<td>Local authorities</td>
<td>Parents should notify their child’s school when they emigrate.</td>
<td>No statistics are collated on this information.</td>
</tr>
<tr>
<td>Incapacity benefit</td>
<td>British citizens over 18 living abroad but registered to vote in the UK within the last 15 years can apply as an overseas voter.</td>
<td>There is no indication on the number that are overseas for a period of more than one year.</td>
</tr>
<tr>
<td>Department for Work and Pensions</td>
<td>People may receive vaccinations prior to emigrating.</td>
<td>NHS data cannot distinguish an emigrant from a holiday maker.</td>
</tr>
<tr>
<td>Education Statistics</td>
<td>Data from the Inland Revenue may be able to identify gaps in tax payments which may indicate British nationals working abroad.</td>
<td>There is no way of distinguishing people whose tax ceases because they are abroad from those who tax ceases for other reasons.</td>
</tr>
<tr>
<td>Overseas voter registrations</td>
<td>Royal Mail provides a service to redirect mail overseas.</td>
<td>The reason for and the duration of the move are not recorded. Therefore long term moves abroad cannot be distinguished from moves to a second home.</td>
</tr>
<tr>
<td>Electoral Commission</td>
<td>Royal Mail provides a service to redirect mail overseas.</td>
<td></td>
</tr>
<tr>
<td>Tax payments</td>
<td>Royal Mail provides a service to redirect mail overseas.</td>
<td></td>
</tr>
<tr>
<td>Inland Revenue</td>
<td>Royal Mail provides a service to redirect mail overseas.</td>
<td></td>
</tr>
<tr>
<td>Mail redirections abroad</td>
<td>Royal Mail provides a service to redirect mail overseas.</td>
<td></td>
</tr>
</tbody>
</table>

### Trends and Comparisons

Despite these potential problems, ONS have analysed the trends that emerge looking at changes over time in the DWP data for pension claimants overseas. Over recent years there have been increased numbers of pensioners living abroad. Ten years ago, there were about 7 per cent living abroad, whereas in 2004, this was closer to 9 per cent with slightly less females than males. Figure 2 shows this increase across all age groups with the exception of women aged 60-64. The proportion living abroad tends to decrease as people reach the older age groups due to death and return migration to the UK.

Over the last decade, the number of men per 100 women of recipients in Britain has increased from 53 to 60. The sex ratio of recipients overseas is higher and rose from 62 to 64 during the same period. Improvements in mortality will have contributed to this change in the sex ratio. The higher sex ratio for recipients overseas is likely to be, at least in part, due to the better health of retired people seeking to live overseas.

Because the data on the number of pensioners living abroad represents information on the stock of migrants, it is not meaningful to make a direct comparison between this and the IPS data which measure...
migration flows. However, by taking snapshots of the DWP sample records, year on year, proxy flow information can be obtained and these may be compared with existing estimates of emigration from the IPS. Table 2 shows absolute numbers and average sex ratios over the period 2001–2004, for both data sources.

The DWP data identify significantly more migrants than the IPS data. This is shown in Figures 3 and 4 below. While it is possible that the IPS is underestimating emigration, it is also possible that the DWP snapshot data is falsely inflating the number of out-migrants. This is because the DWP data will include some migrants who move overseas but return within the year e.g. people emigrating to warmer climes for the winter months. While the DWP data show a constant trend for more out-migrants year on year, there is more fluctuation in the trend for emigrants in the IPS data, due to sampling error.

### Table 2: Outflows of migrants estimated: by both IPS and DWP data

<table>
<thead>
<tr>
<th>Year</th>
<th>DWP pension recipients</th>
<th>IPS</th>
<th></th>
<th>DWP pension recipients</th>
<th>IPS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males 65 and over</td>
<td>Females 60 and over</td>
<td>Sex ratio</td>
<td>Males 65 and over</td>
<td>Females 60 and over</td>
<td>Sex ratio</td>
</tr>
<tr>
<td>2000</td>
<td>3,700</td>
<td>6,100</td>
<td>61</td>
<td>800</td>
<td>3,500</td>
<td>23</td>
</tr>
<tr>
<td>2001</td>
<td>4,500</td>
<td>5,600</td>
<td>80</td>
<td>3,100</td>
<td>4,300</td>
<td>72</td>
</tr>
<tr>
<td>2002</td>
<td>5,800</td>
<td>8,500</td>
<td>68</td>
<td>2,100</td>
<td>6,600</td>
<td>32</td>
</tr>
<tr>
<td>2003</td>
<td>6,500</td>
<td>8,700</td>
<td>75</td>
<td>4,900</td>
<td>3,000</td>
<td>163</td>
</tr>
<tr>
<td>2004</td>
<td>6,400</td>
<td>9,700</td>
<td>66</td>
<td>3,400</td>
<td>4,600</td>
<td>73</td>
</tr>
<tr>
<td>2000–2004</td>
<td>26,900</td>
<td>38,600</td>
<td>70</td>
<td>14,300</td>
<td>22,000</td>
<td>65</td>
</tr>
</tbody>
</table>

Source: DWP – 5% sample pensions database. Annual flows using snapshot data (October to September). IPS data by calendar year.

This is further illustrated when the comparison is made by country of destination of all out-migrants from Great Britain. Figure 5 shows the top ten destinations for migrants of pension age from the two datasets. The DWP data shows significantly higher numbers moving to Spain and France (traditional seasonal migration) and fewer to longer term destinations, with the exception of New Zealand, Jamaica and Pakistan where the differences may be due to small IPS sample sizes.

### National Health Service records

When people emigrate they should inform their family doctor that they are leaving the country and therefore no longer require access to the health service through their doctor. This information is then fed to the central health service database – the National Health Service Central...
Register (NHSCR). These data are currently an important component in the estimation of migrant flows within the UK. ONS has considered whether or not the data held on the NHSCR could be used as an alternative to existing sources for both immigration and emigration (see Annex 6.1 of a previous review of the quality of international migration statistics). A particular question is whether these data could be used to distribute international migrants geographically at local authority level, since this is where the sample nature of the IPS makes estimation more challenging. ONS is carrying out further work on the geographical distribution of international migrants and this will be reported in a future Population Trends article. The research into the use of health register data to improve estimates of emigration has not provided solutions as will be discussed in the following sections.

**Description of the data**

The NHSCR database is updated when people notify their doctor that they are leaving the UK to live abroad. Currently, patients who leave the country for three months or more have an embarkation flag attached to their record on the NHSCR database, but remain on the database in case they later return to the UK. For people leaving the UK for more than 3 months, information is updated by either patients notifying their doctor or notifications of deaths abroad received via the Consulate.

**Data quality**

Procedures used by GP practices to keep patient registers up to date vary between practices and health areas. If there are concerns that a patient may have moved or emigrated because they have not visited their GP for some time, there is a procedure culminating in removal from the GP’s list, but it is unclear how closely this guidance is followed and it is likely to vary considerably between health areas. In addition it is widely acknowledged that the under-coverage of emigration on the NHSCR data is potentially a major problem. There is little or no incentive for patients to notify the NHS of their departure from the UK. While the NHS card carries instructions to notify the health area if a patient intends to go abroad for three months or more, it is known that many emigrating individuals ignore this. Because of these two data quality issues, the number of people identified as emigrants in the NHSCR data has considerable scope for error.

**Trends and comparisons**

Comparisons can be made between the level of emigration recorded in the NHSCR and those recorded in the IPS. Work carried out by Bulusu in 1991 compared the number of international migrants identified in the IPS with those identified in the NHSCR. The outflows in the NHSCR were approximately a quarter of those in the IPS, suggesting a significant under-coverage of emigration in the NHSCR. However the coverage problems affecting overall counts of migrants did not necessarily distort regional distributions. IPS data suggested 27.7 per cent of international migrants left Greater London while the NHSCR suggested 28.1 per cent left Greater London. However, Bulusu concluded that the distribution based on NHSCR data may not be better than the IPS. Whereas the IPS data for emigration are based on last actual residence of long-term migrants leaving the UK, the NHSCR distribution may be biased in favour of short-term employees such as au pairs who may need to register with authorities during their stay and thus surrender their NHS card along with other papers.

ONS has now carried out further analysis on similar data for 2000–2002. Again, the outflows recorded from the NHSCR were about 25 per cent of those observed in the current ONS migration estimates indicating significant undercoverage. It was also found that the number of people leaving the NHS to live abroad differ considerably between the sexes at ages 18–40, with far more females de-registering than males. In addition people of retirement age were more likely to notify their GP when they left the country, possibly due to the greater likelihood that they might need medication or medical treatment while abroad. In contrast to the earlier research, the geographical distributions of the NHSCR outflows were markedly different to those estimated by IPS.

**Drivers’ Licence records**

The Driver and Vehicle Licensing Agency (DVLA) hold information on everyone who has a driving licence. When a person emigrates abroad, they should surrender their driving licence in exchange for a foreign driving licence. While, for countries within the EEA, it is not essential to exchange a UK driving licence when moving abroad; for some countries, it is possible to exchange a UK licence for a licence in that country. For
Description of the data source

The DVLA data holds two markers which could provide information about UK driving licence holders who have moved abroad. The first is the ‘foreign address’ marker which is set when a licence holder informs the DVLA that they are moving overseas i.e. anywhere not on the UK mainland so will include moves to Jersey and Northern Ireland. The second is the ‘foreign exchange’ marker which is set when an overseas issuing authority returns the exchanged licence to the DVLA.

Data quality

In terms of coverage there are several issues concerning these data. The first is that not all records that are marked as ‘foreign exchange’ relate to UK residents who have emigrated. Misplaced licences belonging to UK visitors/holidaymakers are also returned to the DVLA by overseas issuing authorities alongside licences that have genuinely been exchanged due to emigration. Unfortunately, the DVLA has no way of identifying misplaced licences from exchanged licences. In addition, not all overseas issuing offices return exchanged licences to the DVLA. Secondly, licence holders that emigrate without informing the DVLA would be excluded. Thirdly, people that emigrate without holding a driving licence, including dependents would be excluded from the data source. Another important practical consideration is the limited data availability - these markers have only been recorded for the last five years and data were only available for analysis from 2000 and 2001.

Findings of the analysis of pension, health and driving licence data

Initial investigations have been concentrated on information held by the DWP on pension recipients who are living abroad; National Health Service data captured when people report to their doctor that they are emigrating; and records held by the DVLA on people surrendering their licence when they leave the country. The analysis of the pension data has confirmed that there has been increased migration of older people in the last few years. The data comparison between the IPS flows and estimated flows based on DVLA data has shown some differences in the estimates from the two data sources. This is likely to be due in part to definitional differences: in particular the inclusion of winter migrants to warmer parts of Europe in the DWP data, and also the risk of deflation due to the reliance of the migrant informing the DWP when they move abroad. Pension-based estimates of emigration will under-estimate where migrants do not inform the DWP of their move overseas but also over-estimate where migrants are included who do not stay overseas for a full twelve months. Further work is needed to gain better understanding of the likely quality of estimates of out-migration of people of pension age based on DWP data. These data may also be useful for considering trends over time and for quality assurance at the sub national level.

ONS have concluded that the NHSCR is unlikely to be a better source than the IPS to measure emigration; it would under-estimate the true level of emigration because migrants do not generally inform their GP when they leave the country. However, the data do indicate better coverage at older age groups than for young adults. This finding is further confirmed by evaluating the emigration information held as part of the Longitudinal Study (LS). The LS guidance discusses the delays in identifying emigrants due to delays in the NHS being notified and concludes that the ‘NHSCR is definitely a worse source of emigrant data than the national statistics’. Initiatives such as the National Duplicate Registration initiative being carried out by the NHS Connecting for Health, which is cross matching the patient registration data from each of the Health Boards to identify and remove duplicate registrations, may improve the ability to measure immigrants. However, it is likely that there will be little impact on the accuracy of emigrants. ONS will continue to assess this as it progresses.

Having taken the data quality issues into consideration, ONS have concluded that data from DVLA would not provide reliable estimates of persons emigrating overseas. The main reason for making this decision was that the data would incorrectly include persons who have mislaid their licence while on holiday abroad. It was decided not to pursue DVLA data at this time. However, ONS will reconsider these data at a later date, as data quality could improve over time.

Discussion

This article has reported on work carried out by ONS to take forward a recommendation of a previous review of the quality of international migration statistics. The recommendation was to investigate the potential of administrative data sources to assist in the estimation of international out-migration. As new data become available or existing data sources change, ONS will continue to investigate this further. An example where substantial improvements may be made in the future by using administrative data is the Home Office led e-borders project planned for the next decade. This is a joint initiative to record electronically the passport details of all people leaving and entering the UK. It is likely that this administrative source will deliver real improvements to the estimates of international migration at a national level, particularly emigration. Another data source that might be of some value is the EHIC card but this is dependent on the duration overseas being recorded. Further liaison is needed with the Department of Health to monitor the development of this new data source.

Due to the importance attached to the availability of more robust migration statistics, ONS is undertaking a substantial programme of work to improve the methods and data sources that are used to estimate migration and population. Research carried out within the improvement programme will be reported on the National Statistics website and in Population Trends. Previous articles have reported on population definitions research, the feasibility of estimating short-term migrants and further articles are planned for future issues of Population Trends, e.g. to explain the methodological improvements to the estimation of the distribution of international migration between Local Authorities.

In addition, in May 2006 the National Statistician set up an interdepartmental Task Force to recommend timely improvements that could be made to estimates of migration and migrant populations in the UK, both nationally and at local levels. The inter-departmental nature of the Task Force facilitated the investigation of ways of making better use of the information that exists across government on international migrants. The Task Force also explored the potential for improving sources and for making better use of appropriate methodologies in order to improve the quality of statistical reporting. The Task Force reported in December 2006 and an implementation plan will be produced during 2007.
Conclusions

As part of its population and migration statistics improvement work, ONS has investigated a number of administrative sources held in the UK to assess whether they could be used to measure emigration. A number of potential data sources exist but the initial investigations of three data sources indicate some general issues that exist with the majority of administrative data, mainly that these are not likely to be able to provide estimates of emigration that satisfy the internationally agreed definition of leaving the country for more than 12 months. There are also other shortcomings relating to coverage, for example, the NHSCR has the potential to identify emigrants but is currently inadequate because many patients do not notify their GP when they move abroad.

Data provided by DWP on pension claimants moving overseas is a potentially valuable data source which should be investigated further for its potential to help inform emigration estimates. While definitional differences may mean that this data cannot provide an accurate estimate of the number of retired persons leaving the country to live overseas, it could be used to quality assure the estimates for older persons emigrating identified in the IPS data. In addition, it may assist in estimating where older people lived prior to their emigration.

Key findings

- Emigration is a difficult component of population change to estimate accurately.
- Most potential sources cannot distinguish long-term emigrants (those that emigrate for more than 12 months) from short term emigrants and holidaymakers. In addition many data sources will only cover a subset of the emigrating population, for example the National Health Service Central Register (NHSCR) will underestimate emigration because emigrants do not generally inform their doctor when they leave the country.
- Some estimates of older emigrants can be made from Department of Work and Pensions (DWP) data on people abroad claiming a pension. These are potentially useful to improve estimation and ONS will continue to investigate the potential for using these and other alternative datasets in the future.

References
